



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,264	01/05/2001	Tetsuo Usami	OKI.202	3022

7590 03/13/2002

JONES VOLENTINE, L.L.P.  
Suite 150  
12200 Sunrise Vally Drive  
Reston, VA 20191

EXAMINER

RAO, SHRINIVAS H

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 03/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/754,264

Applicant(s)

USAMI ET AL.

Examiner

Steven H. Rao

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of paper submitted under 35 U.S.C. 119(a)-(d), claiming priority from Japanese Patent Application No. 117990/2000 filed April 19, 2000 which papers have been placed of record in the file.

However as the priority documents have not been received the priority has not yet been perfected.

### ***Information Disclosure Statement***

Acknowledgment is made of receipt of Applicant's Information Disclosure Statement (PTO-1449) filed on January 05, 2001.

The references on PTO 1499 submitted on 01/05/2001 are acknowledged. All the cited references have been considered.

However the foreign patents and documents cited by applicant are considered to the extent that could be understood from the abstract and drawings.

The PTO1449 has been initialed and placed in the file and the contract employees instructed to mail a copy of the initialed PTO1449 along with current Office Action.

### ***Drawings***

This application has been filed with drawings on January 05, 2001 which are acceptable .

***Specification***

The disclosure is objected to because of the following informalities:

The application/specification has not been reviewed to the extent necessary to determine all possible minor errors. Applicants' cooperation is appreciated in correcting any errors that applicant may become aware of in the specification/application.

Applicant s' cooperation is appreciated to correct the numerous error in specification and claims due to a translation into English from a foreign document which contains grammatical and idiomatic errors.

Appropriate correction is required.

Claims are examined by examiner as best to understood.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Wang ( U.S. Patent No. 5,604,155, herein after Wang)

With respect to claim 1, Wang teaches a method of depositing a wiring thin film on a semiconductor substrate including the steps of :

Art Unit: 2814

Depositing a Ti film ( Wang fig. 2 # 52, col. 4 lines 3-7) and depositing an Al-Si-Cu film on the Ti film at a temperature of at least 400 degrees. (Wang fig.3 # 108, col. 4 lines 25-26).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang ( U.S. Patent No. 5,604,155, herein after Wang)

With respect to claim 2 it repeats the steps of claim 1 and adds an annealing step at a temperature of at least 400 degrees. ( well known conventional process –Wang col. 4 lines 36-37).

With respect to claims 3 and 4, wherein the steps are depositing A Ti film (Wang fig. 2 # 52, col. 4 lines 3-7); depositing a Al<sub>3</sub> Ti film on the Ti film ( col. 4 lines 34-36) and depositing an Al-Si-Cu film on the Al<sub>3</sub> Ti film at a temperature of at least 400 degrees. ( col. 4 lines 25-26).

With respect to claims 5, wherein the steps are depositing a Ti film ( col. 4 lines 3-7); depositing an Al-Si-Cu film on the Ti film at a temperature of at least 400 degrees.


Art Unit: 2814

(Wang fig.3 # 108, col. 4 lines 25-26) and depositing depositing a  $Al_3$  Ti film on the Al-Si--Cu film ( Wang fig. 3 – Metal II .deposition steps).

Claims 6 and 7 repeat the steps of claims 2 &5 ; and 3 & 5 and are rejected for reasons set out under claims 2 & 5 and 3 & 5 respectively.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Steven H. Rao whose telephone number is (703) 306-5945. The examiner can normally be reached on Monday- Friday from approximately 7:00 a.m. to 5:30 p.m.


Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956. The Group facsimile number is (703) 308-7722.



Steven H. Rao

Patent Examiner

March 02, 2002.



Olik Chaudhuri  
Supervisory Patent Examiner  
Technology Center 2800